

**Amendments to the Claims**

Please cancel Claim(s) 15-22. The Claim Listing below will replace all prior versions of the claims in the application:

**Claim Listing**

1. (Previously Presented) A method for use in encoding and decoding blocks of data representing an image, each block comprising a data set, the method comprising for each block:
  - a first subroutine for partitioning the data set into first and second sets, for adding the first set into a list of insignificant sets (LIS), and for initializing a list of significant pixels (LSP);
  - a second subroutine for testing the first and second sets for significance with respect to a threshold value, partitioning significant members of the first and second sets in accordance with first and second partitioning functions, respectively, and adding significant pixels to the LSP;
  - a third subroutine for refining the quantization of the pixels in the LSP; and
  - a fourth subroutine for decrementing the threshold value,  
wherein the second, third and fourth subroutines are repeated until encoding/decoding of the data set has been completed.
2. (Original) The method as recited in claim 1, wherein the fourth subroutine further comprises a routine for entropy coding a significance map generated in accordance with the second and third subroutines.
3. (Original) The method as recited in claim 1, wherein members of the first set demonstrating significance with respect to the threshold value are partitioned employing a quadtree partitioning scheme.

4. (Original) The method as recited in claim 3, wherein members of the first set demonstrating significance with respect to the threshold value are recursively partitioned employing a quadtree partitioning scheme.
5. (Original) The method as recited in claim 1, wherein members of the second set demonstrating significance are with respect to the threshold value partitioned employing octave band partitioning.
6. (Original) The method as recited in claim 5, wherein members of the second set demonstrating significance are with respect to the threshold value recursively partitioned employing octave band partitioning.
7. (Original) The method as recited in claim 2, wherein the subroutine for entropy coding is performed using arithmetic coding.
8. (Previously Presented) The method as recited in claim 1, wherein the image comprises a sequence of images.
9. (Original) The method as recited in claim 1, wherein the second, third and fourth subroutines are repeated until one of the encoding/decoding of the data indicative of the lowest bit plane has been completed and the bit budget has been spent.
10. (Previously Presented) A coder for use in encoding and decoding blocks of data corresponding to an image, each block comprising a data set, comprising:
  - first means for partitioning the subband transformation for each block into first and second sets, for adding the first set into a list of insignificant sets (LIS), and for initializing a list of significant pixels (LSP);
  - second means for testing the first and second sets for significance with respect to a threshold value, partitioning significant members of the first and second sets in accordance

with first and second partitioning functions, respectively, and adding significant pixels to the LSP; and

third means for refining the quantization of the pixels in the LSP;  
wherein said second and third means are employed seriatim as the threshold value is decremented until encoding/decoding of the data set has been completed.

11. (Original) The coder as recited in claim 10, further comprising:  
fourth means for entropy coding a significance map cooperatively generated by the second and third means.
12. (Original) The coder as recited in claim 10, wherein members of the first set demonstrating significance with respect to the threshold value are partitioned employing a quadtree partitioning scheme.
13. (Original) The coder as recited in claim 10, wherein members of the second set demonstrating significance are partitioned employing octave band partitioning.
14. (Original) The coder as recited in claim 11, wherein the fourth means performs entropy coding using arithmetic coding.
15. Canceled
16. Canceled
17. Canceled
18. Canceled
19. Canceled

20. Canceled
21. Canceled
22. Canceled
23. (Previously presented) A computer readable medium having computer readable program codes embodied therein for encoding and decoding a data set representing an image, the computer readable medium program codes performing functions comprising:
  - (a) partitioning the data set into first and second sets, adding the first set into a list of insignificant sets (LIS), and initializing a list of significant pixels (LSP);
  - (b) testing the first and second sets for significance with respect to a threshold value, partitioning significant members of the first and second sets in accordance with first and second partitioning functions, respectively, and adding significant pixels to the LSP;
  - (c) refining the quantization of the pixels in the LSP; and
  - (d) decrementing the threshold value,  
wherein (b), (c) and (d) are repeated until encoding/decoding of the data set has been completed.
24. (Previously presented) The computer readable medium as recited in claim 23, further comprising entropy coding a significance map generated in accordance with (b) and (c).
25. (Previously presented) The computer readable medium as recited in claim 23, wherein members of the first set demonstrating significance with respect to the threshold value are partitioned employing a quadtree partitioning scheme.
26. (Previously presented) The computer readable medium as recited in claim 25, wherein members of the first set demonstrating significance with respect to the threshold value are recursively partitioned employing a quadtree partitioning scheme.

27. (Previously presented) The computer readable medium as recited in claim 23, wherein members of the second set demonstrating significance are with respect to the threshold value partitioned employing octave band partitioning.
28. (Previously presented) The computer readable medium as recited in claim 27, wherein members of the second set demonstrating significance are with respect to the threshold value recursively partitioned employing octave band partitioning.
29. (Previously presented) The computer readable medium as recited in claim 24, wherein entropy coding is performed using arithmetic coding.
30. (Previously presented) The computer readable medium as recited in claim 23, wherein the image comprises a sequence of images which vary over time.
31. (Previously presented) The computer readable medium as recited in claim 23, wherein (b), (c) and (d) are repeated until one of the encoding/decoding of the data indicative of the lowest bit plane has been completed and the bit budget has been spent.
32. (Previously presented) A method for use in encoding and decoding a data set representing an image having at least two dimensions, the method comprising:
  - a first subroutine for partitioning the data set into first and second sets, for adding the first set into a list of insignificant sets (LIS), and for initializing a list of significant pixels (LSP);
  - a second subroutine for testing the first and second sets for significance with respect to a threshold value, partitioning significant members of the first and second sets in accordance with first and second partitioning functions, respectively, and adding significant pixels to the LSP;
  - a third subroutine for refining the quantization of the pixels in the LSP; and
  - a fourth subroutine for decrementing the threshold value,

wherein the second, third and fourth subroutines are repeated until encoding/decoding of the data set has been completed.

33. (Previously presented) The method as recited in claim 32, wherein the image comprises a sequence of images.
34. (Previously presented) The method as recited in claim 32, wherein the image comprises a fixed three-dimensional image.